

IARU Monitoring System Region 1



Monthly Newsletter - February 2024

Video feature: to watch the videos, click on the icon in the text or in the images of the Newsletter



IARUMS Wiki

An IARU Monitoring System Wiki has been published in the [IARUMS R1 page](#) to assist users in recognizing and identifying the most usual modes used by non-amateur radio stations in the HF amateur radio bands. It contains a discreet technical description for each mode, as well as audio recordings, waterfall screenshots, and video captures of the transmissions.



This Wiki will be updated as new signals will be received and processed, and as we get better screenshots / audio / video recordings of them.

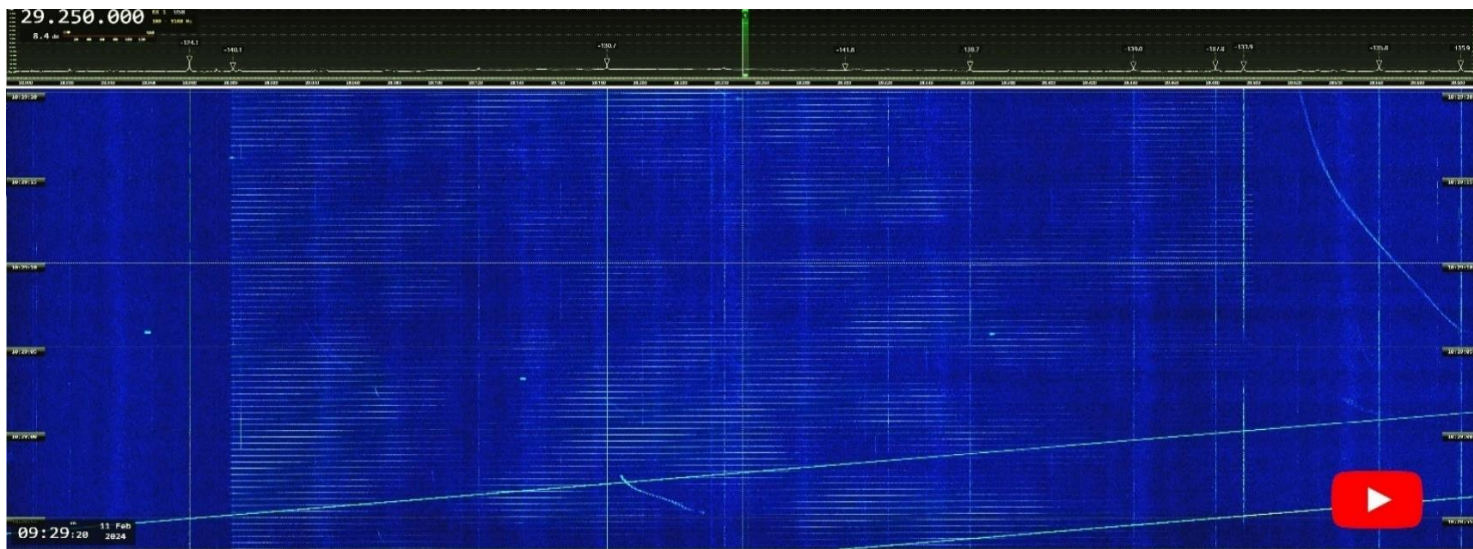
The IARUMS Wiki can be directly accessed via this link: <https://www.iaru-r1.org/spectrum/monitoring-system/iarums-wiki/>

New DARC IARUMS coordinator

Daniel, DL3RTL resigned as IARUMS DARC (Germany) coordinator. We thank him for the work done and for his help in IARUMS R1. We welcome Harald, DL9NDW as new DARC IARUMS coordinator and wish him success in this role.

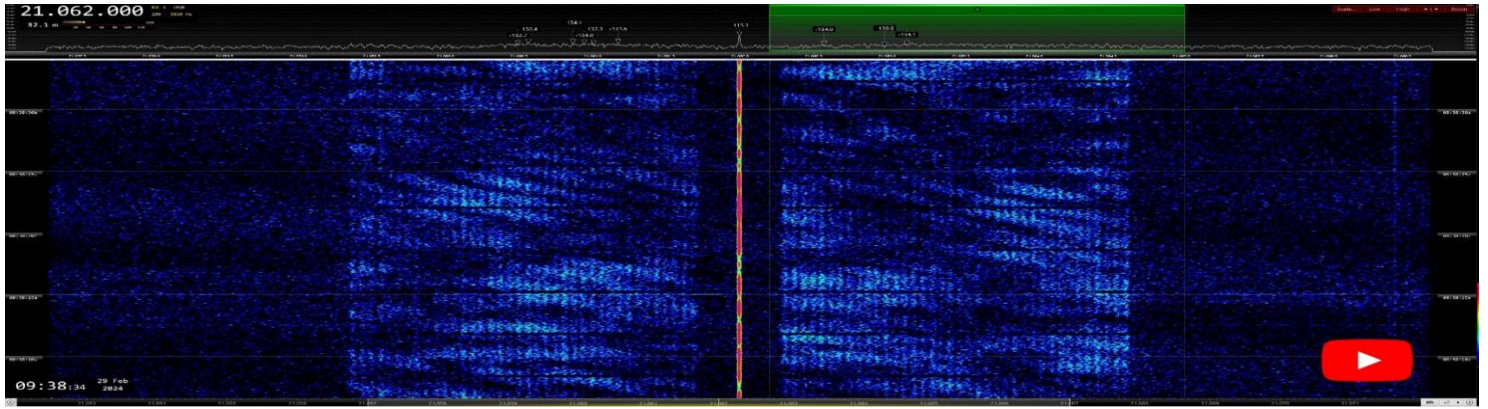
News and info

During February 2024, apart from the regrettably usual annoying non-amateur transmissions received in the HF bands allocated to the amateur radio, we received some unknown signals, like the following unknown radar. BW = 500 kHz!



February the 11th, 0929 UTC. 29250 kHz CF: Unknown radar. BW = 500 kHz. 2.73 sps. Long-lasting

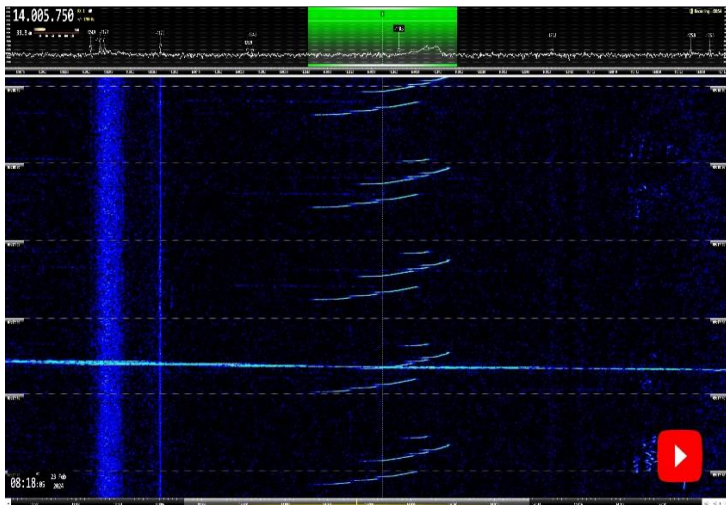
We also received an unknow signal on the 15 m band two times, with a central carrier (AM; A3E), sending bursts and operating bandwidth and signal changes:



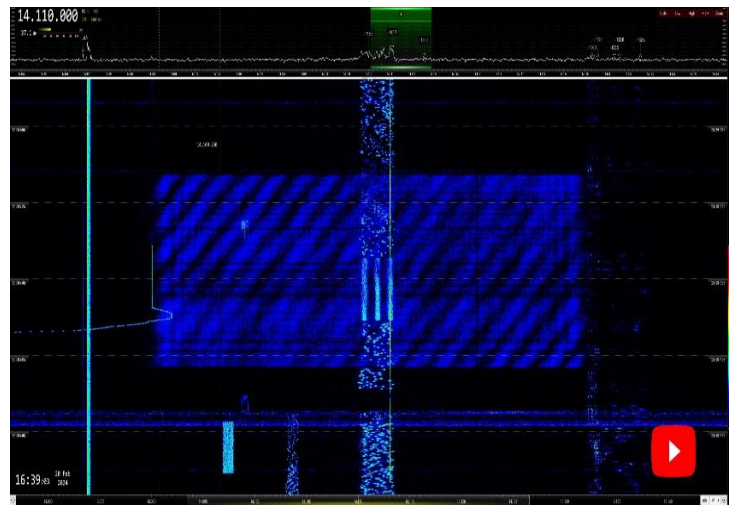
XXX. Unidentified signal. 21000 kHz CF on 03 FEB 2024, 0736 UTC and on 21062 kHz CF (screenshot) on 29 FEB 2024, 0838 UTC

Since February the 23th, unidentified burst (BD ca 3sec. BRI ca 3 sec) were daily observed until the end of the month on 14005.75 kHz CF and at the same time on 14258.5 kHz CF, both transmissions being long-lasting.

Unknown 20 kHz wide bursts (25 sps) were also observed on 20 m on February the 20th.

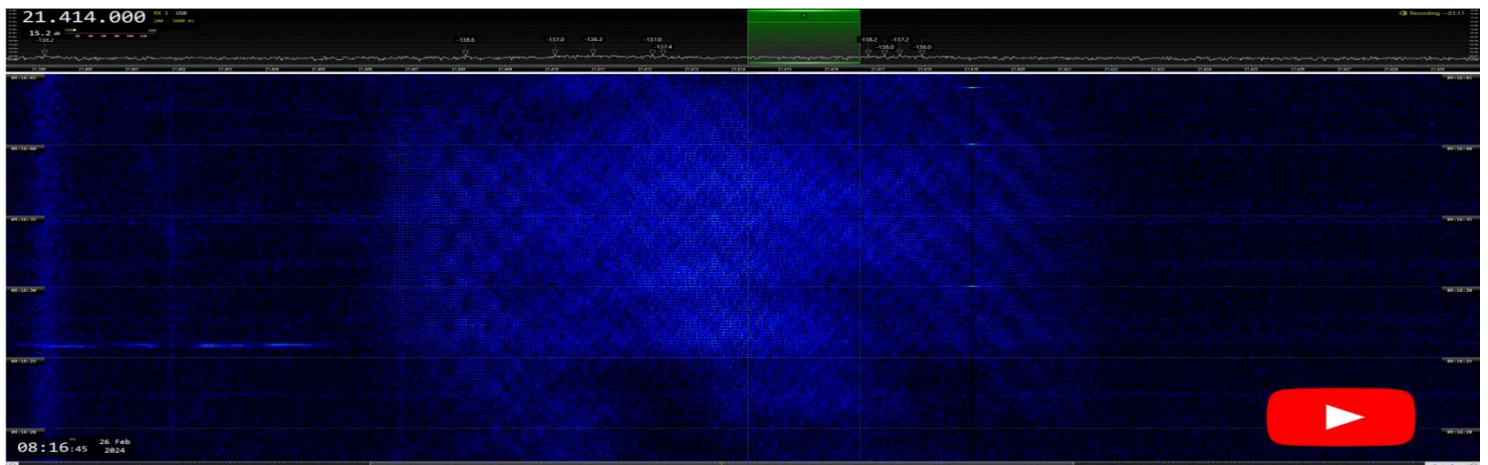


21005.75 kHz CF and 14258.5 kHz CF: Unidentified bursts. BW ca 3K40E.



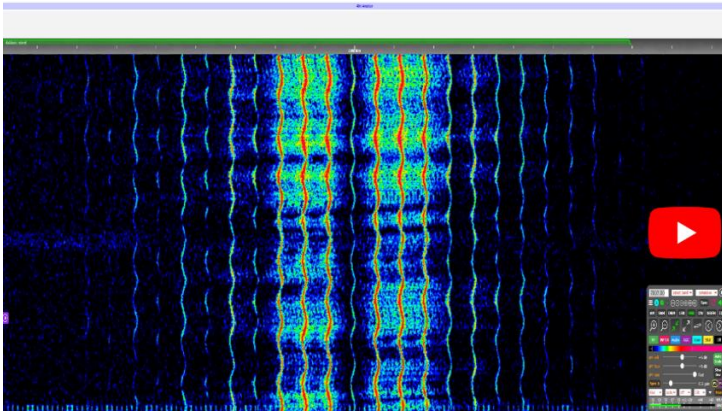
14110 kHz CF: XXX: Unidentified bursts. BW = 20K0E. 25 sps

We also observed an unknown weak signal on 21414 kHz CF (bandwidth ca 15 kHz) which was received daily during the morning UTC hours, and long-lasting:

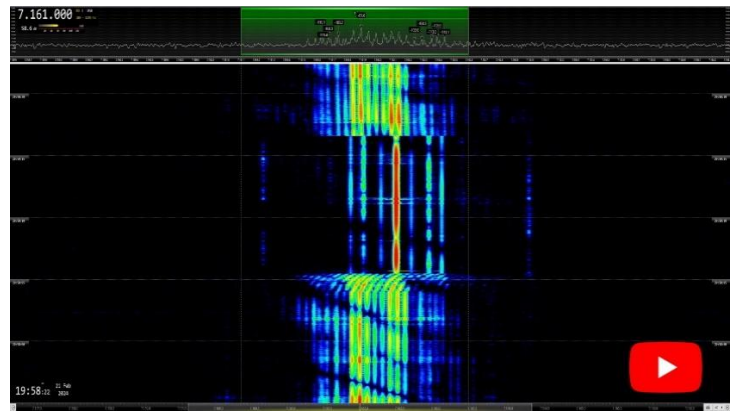


21414 kHz: XXX. Unidentified signal. BW ca 15 kHz. Daily during February 2024. Long-lasting. Weak and QSB.

Now speaking more of oddities than about unknown signals, we received two FSK (F1B) transmissions, one of them idling and unclean, and the other one, defective:



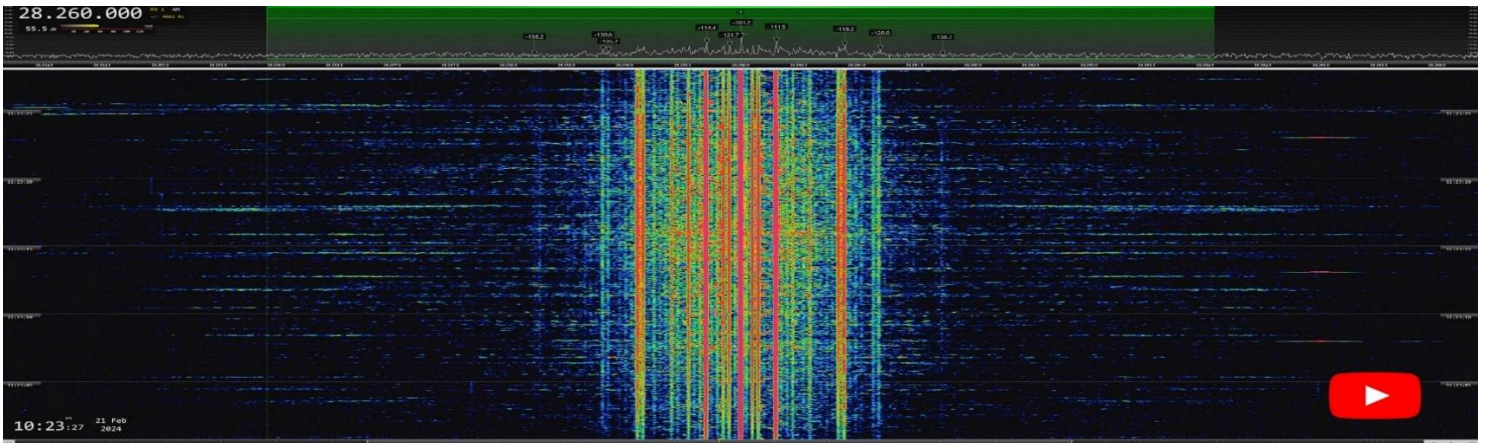
7008 kHz CF: F1B. Shift = 250 Hz. Idle. Unclean (Via KiwiSDR)



7162 kHz CF, F1B. RUS. Shift = 250 Hz. Defective system

Broadcasting

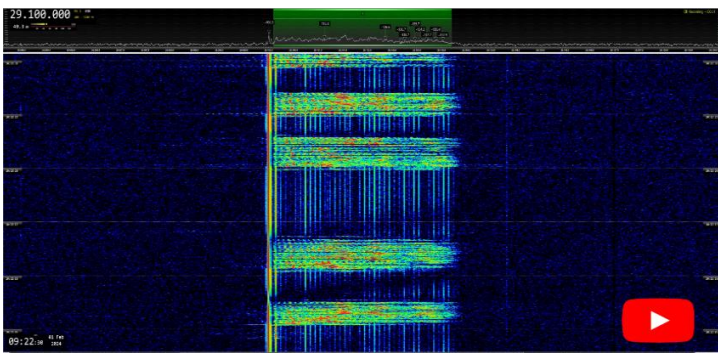
Daily observed from 1000 UTC to 1100 UTC, we received an harmonic of the station „Radio Free Asia“ (AM. A3E. BW = 9 kHz. CF QRG = 9420 kHz; transmitting from Tajikistan) on the 10 m band, on 9420 kHz kHz CF:



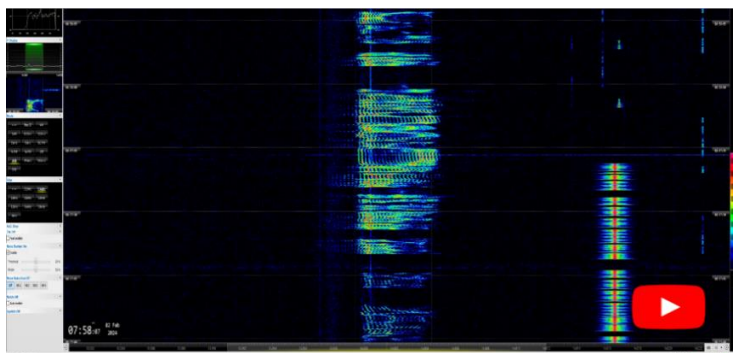
28260 kHz CF: AM. A3E. Harmonic of the broadcasting station „Radigo Free Asia“. TJK. (Main QRG: 9420 kHz CF). Daily, 1000 UTC to 1100 UTC

SSB

The longlasting carrier and the sporadic SSB (J3E-U) non-amateur – most probably, MIL – short transmissions were also received daily on 29100 kHz USB (BW = 3K20E) during February, like on the last months. We also often received the well known transmissions of a group of Spanish fishers, operating since many years on 21000 kHz USB (J3E-U), but also sometimes received on 14000 kHz USB:



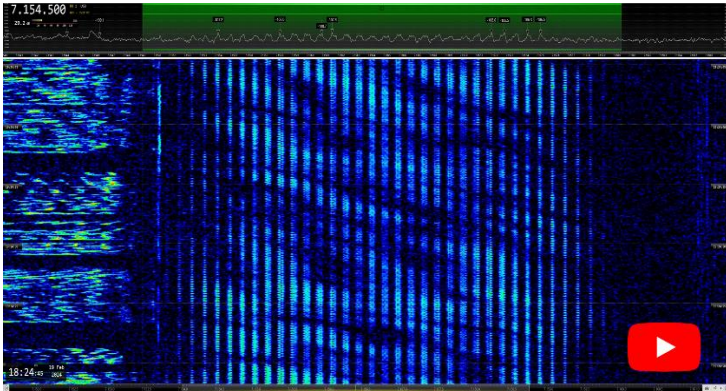
29100 kHz USB: Carrier + sporadic non-amateur short USB TX. Daily



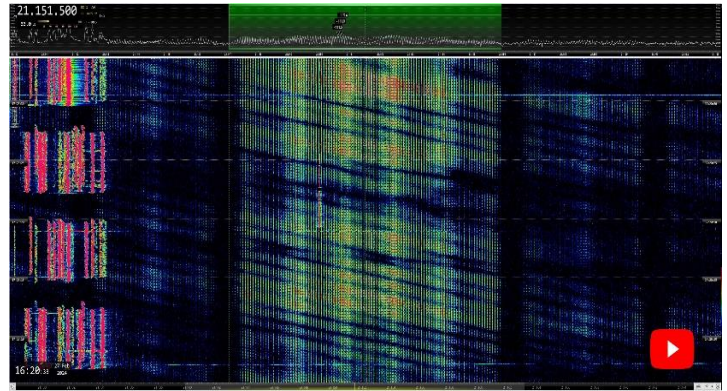
14000 kHz USB. Spanish fishers. Often

Jammers

This type of transmissions, more and more widely used in the electromagnetic warfare field, has unfortunately become much more frequent in our bands since the beginning of the war in Ukraine. We received almost daily one of them on 7156.5 kHz CF, and several times another one on 21151 kHz CF, both developed from a 85 Hz tone



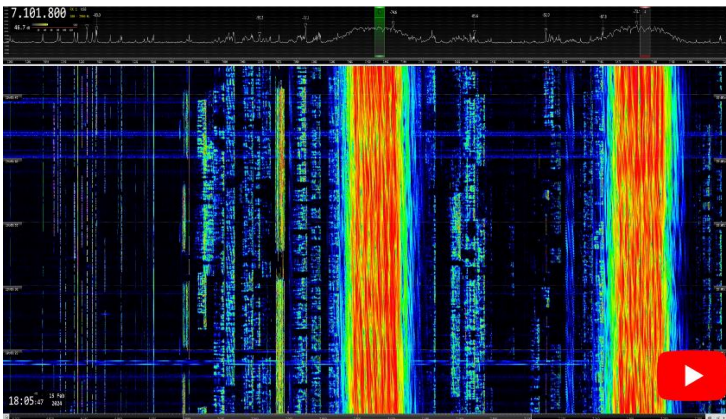
7156.5 kHz CF. XXX. Jammer. BW ca 2K50E. Almost daily



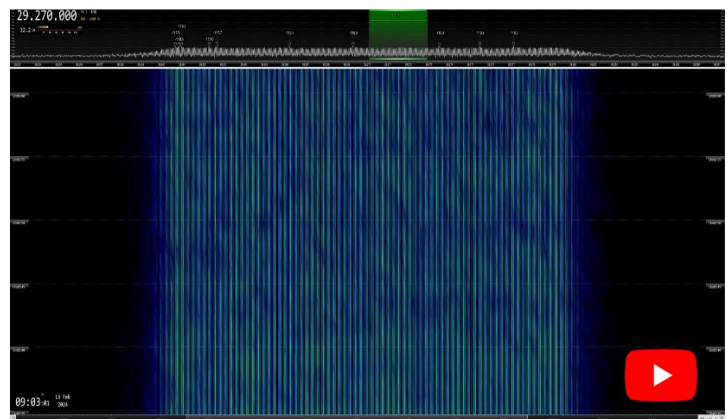
21151.5 kHz CF: XXX. Jammer. BW ca 10K0E. Often

Radars

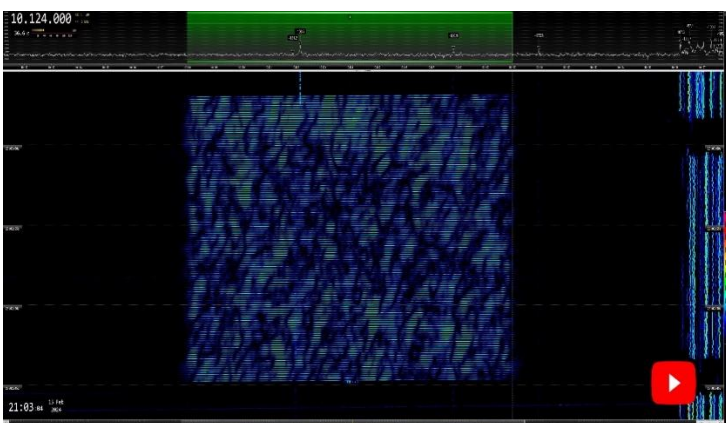
Due to their large amount, the large bandwidth they occupy, and to the huge power used in these transmissions, theirs are the most annoying non-amateur transmissions disturbing the HF amateur bands. Below, just a few samples of the different over the horizon radar's transmissions we received along February 2024:



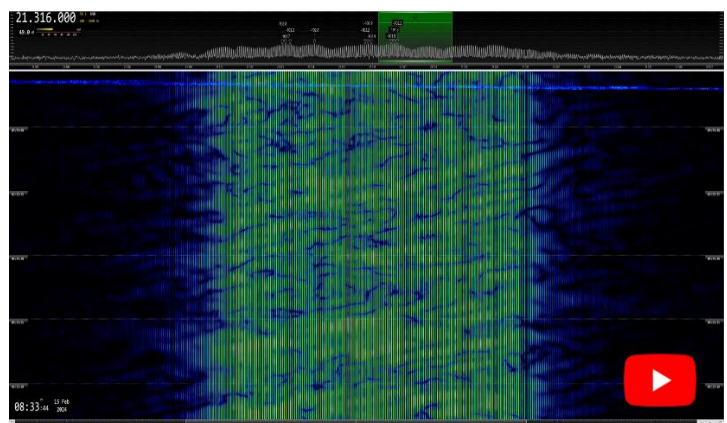
40 m band: 2 X OTHR Contayner. RUS. FMOP. BW = 12K0E. 40 sps



29270 kHz CF: OTHR. G (UK SBA; Cyprus). FMCW. BW = 20K0E. 50 sps





10124 kHz CF: OTHR JORN bursts. AUS. BW = 12K0E. 7.2 sps



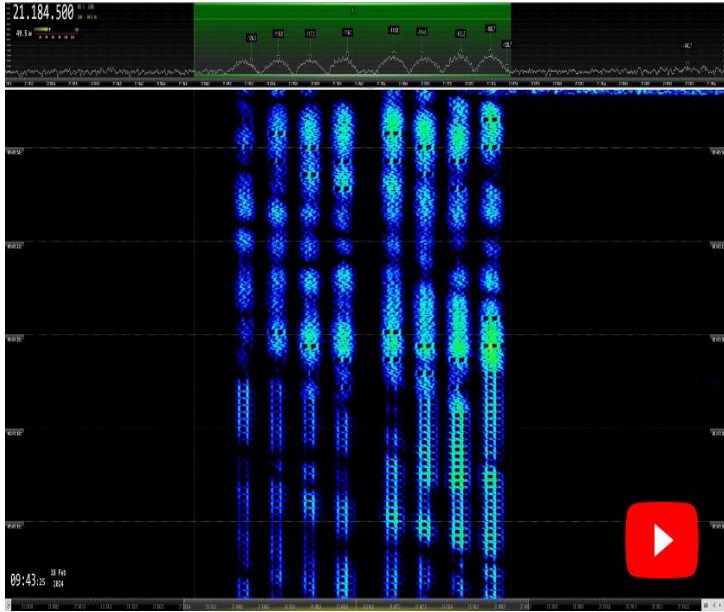
21316 kHz CF: CHN OTHR. FMCW. BW = 10K0E. 50 sps

We also observed many transmissions of the following radars:

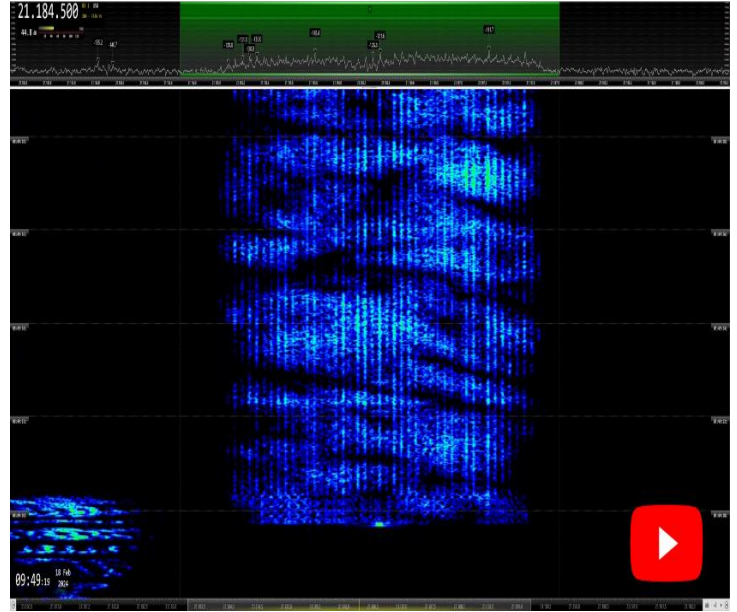
- CHN OTHR „Foghorn“. FMCW. BW = 10K0E. 41.7, 50, 66.7 or 83.3 sps short bursts. Daily (40 to 12m) 
- OTHR IRN: AMOP. BW ca 45K0E. Alternating 150 sps and 313 sps bursts. Almost daily (10m) 

MIL & GOV

Several transmissions using a CHN unidentified DQPSK modem (BW = 2K40E. Bd = 2400) were observed bening sent following CHN 4+4 transmissions (PSK. G7D. BW = 2K40E. 8 x 45 Bd) on the same CF QRG:

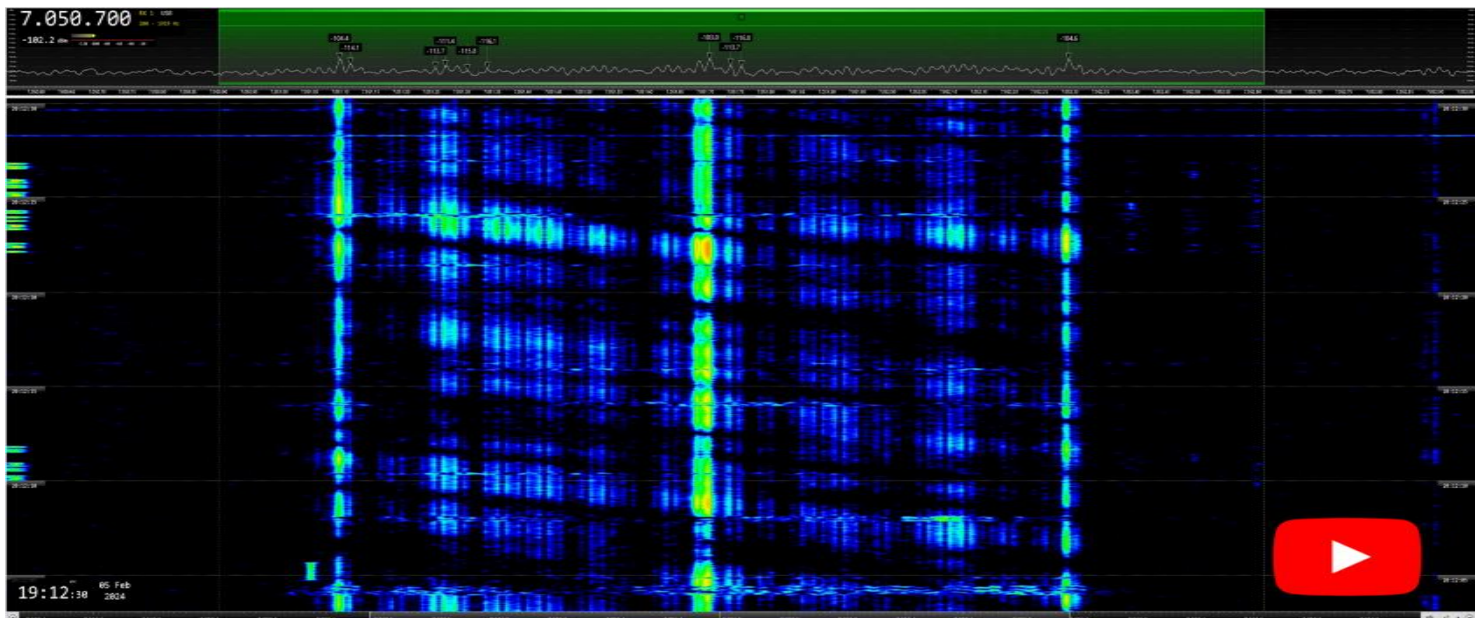


21184.5 kHz USB: CHN 4+4. G7D. BW = 2K40E. 8 x 75 Bd

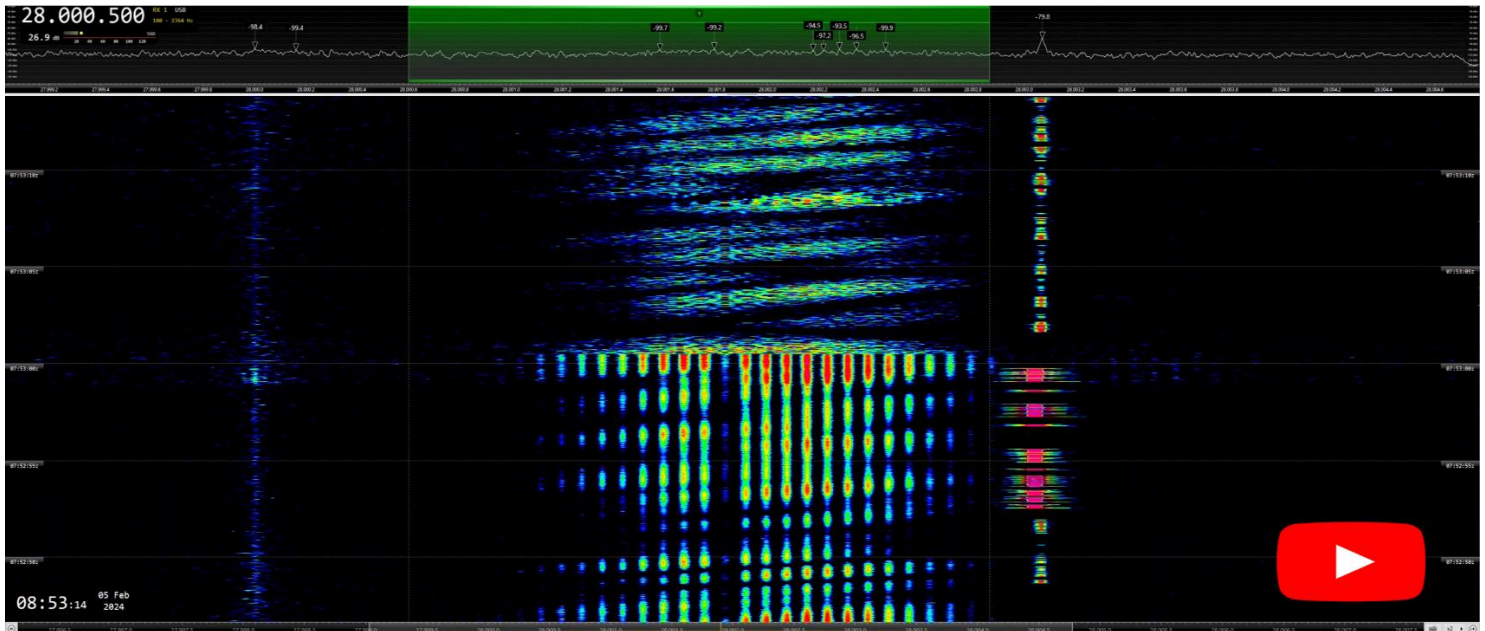


21184.5 kHz USB: Unid CHN modem. DQPSK. BW = 2K40E. 2400 Bd

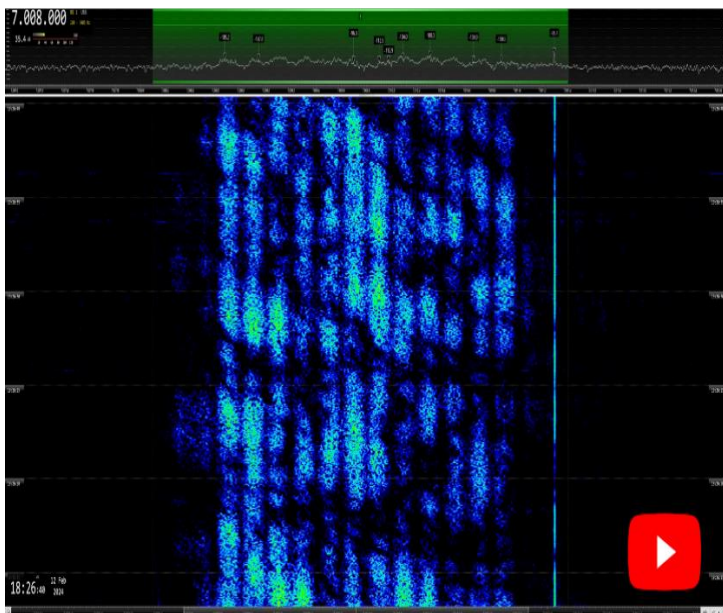
Russian Tactical Data Link long-lasting transmissions were heard almost daily on 7051.7 kHz CF. A T-230 (a.k.a. Mahovik) was received on 28001.8 kHz CF. CIS-12 transmissions were observed too, mostly on the 40m and 20 m bands. Some CIS-60 transmissions were also noted on the 20 m band:



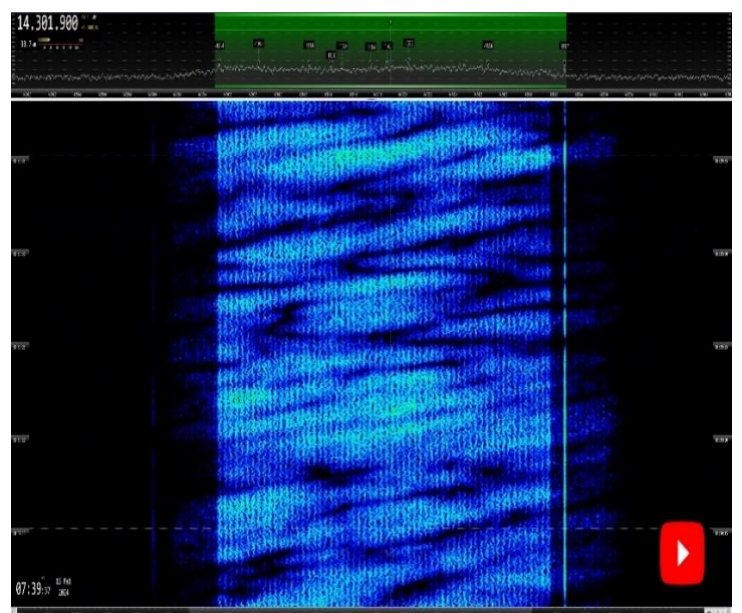
7051.7 kHz CF: RUS Tactical DATA LINK. PSK BW = 1K20E. 800 Bd



28002 kHz CFT-230, a.k.a Mahovik. PSK. BW = 1K20E. 1200 Bd








7010 kHz CF: CIS-12. J7D. BW = 2K70E. 12 x 120 Bd



14302 kHz CF: CIS-60. OFDM. W7D. BW = 2K80E. 60 x 30Bd

We also received transmissions sent on the following modes:

- DPRK-FSK 600 ARQ. F1D. Shift = 600 Hz. Bd = 600. Very often (20 and 15 m) 
- DPRK PSK 1200 ARQ. G1D. BW = 1K20E. 1200 Bd. Often. (20m) 
- Many CIS-## F1B (FSK) transmissions, using different shifts and baud rates. Daily. (40, 20 and 15 m) 
- CIS 36-50 F1B (FSK) and F1A (FSK telegraphy for aural reception). Shift = 200 Hz. 50 Bd. Often (40 m) 
- MIL-188-141A ALE. MFSK. J7D. BW = 1K80E. 8 x 125 Bd. Often (40m and 15m) 

- ***Find other screenshots and videos about the intrusions received during February at the end of this Newsletter*** -

Detailed reports of national coordinators

Abbreviations used (as per IARUMS definitions)

aka = also known as | **BC** = Broadcast | **Bd** = Baud | **BD** = Burst duration) | **BRI** = Burst repetition interval. **BW** = Bandwidth | **ca** = approximate | **CHN** = **PRC** = People’s Republic of China | **CF** = Center frequency **DF** = Direction finding (radio location; see also TDoA) | **FMCW** = frequency modulated continuous wave **FMOP** = frequency modulated on pulse | **OTHR** = over the horizon radar | **SH** = Shift (Hz) | **sps** = sweeps per second | **TDoA** = Time difference of arrival | **ui** = **unid** = unidentified.

IRTS; Michael, EI3GYB									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
6975	1930	29	2			RADAR			Radar from 6975 to 7005 kHz. Strong and persistent.
6985	1530	7	2			RADAR			Radar from 6985 to 7010 kHz.Huge and persistent.Also heard on the 19 th at the same time.
7010	2040	19	2	RUS		RADAR			7010 to 7060 kHz.“Sunflower”. Weak but persistent.
7055	1930	1	2	RUS-UKR		LSB			Russian- Ukrainian radio war. Heard nearly every day of the month at various times during the day.
7055	1810	1	2			RADAR			Radar from 7055 to 7075 kHz. Huge and persistent.
7085	2220	29	2			RADAR			Radar from 7085 to 7135 kHz. Huge and persistent.
7158	2030	23	2			Digital			Huge persistent signal. Unknown mode or origin. Persistent. Still audible at 2300z.
7193	1525	19	2			PSK			Strong and persistent.
14192	1100	1	2	RUS		F1B			RUS navy Kaliningrad. Daily all day long with a medium to strong signal.
18120	1045	29	2	CHN		RADAR			18120 to 18140 kHz. Short but strong bursts. Persistent. Ends around 1200z.
18138	1244	2	2	UK		RADAR			Radar from 18138 to 18180 kHz. Very strong and persistent.SBA on Cyprus. Also heard on the 3 rd at 1245z and 20 th at 1245z with a slight variation of the affected spectrum of the 18 MHz band.
21000	1405	19	2	E or MM		USB			Spanish sailors chatting. Medium signals. Heard on other days at various times as well.
21295	945	28	2	G		RADAR			Radar from 21295 to 21315 kHz. Very strong and persistent.UK SBA in Cyprus.
21350	1445	27	2	G		RADAR			Radar from 21350 to 21380 kHz. Very Strong and persistent. UK SBA in Cyprus.
21438	1245	10	2	UKR		CW			RUS navy Sevastopol. Daily all day long with a medium to strong signal.
24953	1015	16	2	G		RADAR			Radar from 24953 to 24973 kHz. Strong and persistent. UK SBA in Cyprus.
28568	925	23	2	G		RADAR			Radar from 28568 to 28588 kHz. Strong and persistent. UK SBA in Cyprus
28650	1420	5	2			FM			Carrier. Persistent and strong.Also heard on the 8 th at 1500z.
28745	1255	2	2	G		RADAR			Radar from 28745 to 28765 kHz. UK SBA in Cyprus
28830	1330	19	2	IRN		RADAR			Radar from 28830 to 28900 kHz. Strong and persistent.Heard on many days at various

IRTS; Michael, EI3GYB

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
									times.
29100	1335	5	2			FM			Carrier. Strong. Dail all day long with slight fading.
29246	1505	7	2	IRN		RADAR			Radar from 29246 to 29266 kHz. Strong and persistent.
29420	1340	19	2	IRN		RADAR			Radar from 29420 to 29480 kHz. Strong and persistent.
29449	1545	7	2			F1B			Strong. Also heard on the 26 th at 1455z.
29640	1335	19	2	G		RADAR			Radar from 29640 to 29600 kHz. Huge and persistent. UK SBA on Cyprus.

PZK; SP3AMO, SP5GNI

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7041.0	1851	08	02			Radar	40	12K0E	
7051.7	vt	vd	02			UI		1K2E	1
7066.0	1853	08	02			Radar	40	12K0E	
7100.0	1231	21	02			PSK	120	2K50E	599
7193.0	1103	08	02			NON/PSK		1K80E	
7193.0	vt	vd	02			NON/F1B		200H	
14115.0	1848	08	02			UI		1K50E	
14157.0	1127	13	02			RADAR		12K0E	S9+
14214.0	1108	08	02			RADAR		10K0E	5 sec burst strong
14256.0	1245	08	02			RADAR		10K0E	5 sec burst strong
14292.0	1230	07	02			F1B		500	S9
14296.0	1250	14	02			Radar	50	10K0E	Bursts
14306.0	1650	28	02	CHN		RADAR		10K0E	3 sec burst foghorn
14308.0	1200	18	02			F1B		500	S9
14333.0	1225	07	02			RADAR		16K0E	very strong signal
18131.0	0940	14	02	CHN		RADAR		10K0E	3 sec burst foghorn
18165.0	1035	13	02			RADAR		20K0E	S9
21112.0	0800	28	02	CHN		RADAR		10K0E	3 sec burst foghorn
21160.0	0828	29	02			Radar	40	12K0E	599
21162.0	0910	18	02			RADAR		10K0E	5 sec burst
21169.0	vt	18	02	G		RADAR		12K0E	S9+20dB
21182.0	1120	13	02	G		RADAR		12K0E	S9+20dB
21200.0	1255	07	02			RADAR		20K0E	
21298.0	0909	06	02			Radar	66	10K0E	Bursts
21305.0	vt	03	02			RADAR		20K0E	long lasting
21324.0	vt	14	02	CHN		RADAR		10K0E	3 sec burst foghorn
21327.0	1145	10	02			Radar	66	10K0E	Bursts
21350.0	1153	13	02			Radar	50	20K0E	
21350.0	vt	13	02	G		RADAR		20K0E	S9+
21360.0	1045	08	02			RADAR		10K0E	3 sec burst foghorn
21362.0	1108	08	02			Radar	66	10K0E	Bursts
21365.0	1241	18	02			Radar	40	10K0E	Bursts
21369.0	1023	05	02			Radar	66	10K0E	Bursts

PZK; SP3AMO, SP5GNI

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
21374.0	0908	06	02			Radar	50	10K0E	
21378.0	vt	25	02			RADAR		12K0E	S9
21380.0	vt	07	02			RADAR		20K0E	long lasting
21395.0	1255	07	02			RADAR		20K0E	
21415.0	1336	19	02			Radar	40	10K0E	Bursts
21438.0	vt	vd	02		RCV	A1A		20wpm	QTC
28160.0	0950	25	02			RADAR		20K0E	S9+20dB
28335.0	1127	25	02			F3E		6K0	In Spanish non-amateur talk
28700.0	1040	09	02			RADAR		20K0E	S9+20dB
28860.0	vt	vd	02			Radar	150/300	46K0E	599+
29130.0	1110	17	02	CHN		RADAR		20K0E	Foghorn
29270.0	1218	18	02			RADAR		20K0E	S9
29450.0	1050	22	02			Radar	150/300	46K0E	1048 QRV 29500.00 kHz
29470.0	1150	20	02			Radar	50	20K0E	
29490.0	0805	28	02			RADAR		20K0E	S9
29500.0	1026	05	02			Radar	150/300	46K0E	599+
29650.0	1344	19	02			Radar	50	20K0E	

SRAL; Pekka, OH2BLU

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7 MHz	1530-0600	*	2	RUS		RADAR	40 sps	13k0E	*) Days: 1. 3. 8. - 12. 15. 17. 19. 22. (WebSDR 26d)
7 MHz	1415-1830	*	2	CHN		RADAR	66 sps	10k0	*) Days: 2.4. 5. 6. 13. 21. "foghorn"
7000.0	1230-1900	01 - 29	2			A3E		4k0E	Weak modulation, Chinese?
7008.0	0710-1415	*	2	RUS		F1B/ N0N		250H	*) Days: 5. 8. 12.
7014.0	1015-1115	01 05	2	RUS		F1B		250H	
7016.0	1020-1200	12 27	2	RUS		J7D	120	2k60E	
7019.0	0545-1900	*	2	RUS	2LWW etc	F1A/ N0N	15 wpm	200H	*) Days: 15. 16. 20. - 24. 29. 5BL
7032.0	0515-1500	01 - 29	2	RUS		J3E-u		3k50	Non-stop Russian anthem / mx, spur on 7101.7 (QRP?)
7032.0	0000-2400	01 - 29	2	RUS		J3E-u		2k50	Brum (50 Hz), when no music, begins after 1 sec, when mx off.
7032.0	1230-	10	2	RUS		J7D	120	2k60E	
7032.0	1250-	15	2	RUS		F1B		250H	
7042.0	0900-0905/	29	2	RUS		J7D	120	2k60E	
7044.0	1310-1900	01	2	RUS		F1B/ N0N		250H	
7051.7	0515-1930	*	2	RUS		XXX		1k2E	*) Days: 1. 2. 3. 5. - 9. 15. - 29. TDL
7052.0	1245-1530	15	2			jam		6k0E	
7054.0	1100-1900	*	2	RUS		F1B		200H	*) Days: 1. - 8. 12. 21. - 25.

SRAL; Pekka, OH2BLU

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7057.0	1055-1855	14 17	2	RUS		J7D	120	2k60E	
7057.5	1220-1400/	27	2	RUS		F1B		200H	
7058.0	0630-1400	01 03	2	RUS		J7D	120	2k60E	
7066.0	0600-1700	*	2	RUS		F1A/ NON	16wpm	200H	*) Days: 6. 7. 8. 25. - 29. 5BL
7072.0	1030-1600	02	2	RUS		J7D	120	6k60	
7088.0	1305-1415/	16	2	RUS		F1B		250H	
7089.0	0800	15	2	RUS		J7D	120	2k60E	
7101.5	0530-1300	*	2	RUS		XXX		3k3E	*) Days: 13. 14. 16. 19. 20. 27. 29. (jam?)
7156.5	1400-1845	05-29	2	RUS		jam		9k0E	
7159.0	0635-0930	*	2	RUS		F1B/ NON		200H	*) Days: 11. 13. 19.
7184.5	1040-	29	2	RUS		J7D	120	2k60E	
7188.0	1435-	16	2	RUS		F1B		250H	
7193.0	0600-1400	*	2	RUS		F1B/ NON		200H	*) Days: 1. 3. 8. - 11. 13. 14. 16.
10 MHz	0415-0600	04 22	2	G		RADAR	50/25sps	20k0	(WebSDR 2d)
10 MHz			2	RUS		RADAR	40sps	13k0E	(WebSDR 5d)
14 MHz	0500-1815	*	2	RUS		RADAR	40sps	13k0E	*) Days: 3. 7. 15. 26. 27. 29. (WebSDR 8d)
14 MHz	0930-1830	*	2	CHN		RADAR	50/67sps	10k0E	*) Days: 1. 2. 4. 7. 10. 12. 14. 15. 16. 18. 20. 21. 23. - 25. 27. - 29. 'foghorn'
14026.0	1120-	06	2	RUS		J7D	120	2k60E	
14091.0	0810-	08	2	RUS		J7D	120	2k60E	
14170.0	0715-0815	04	2	CHN		RADAR	50 sps	10k0	
14192.0	0530-1700	01 - 29	2	RUS		F1B		200H	
14221.0	0500-0600	01 - 29	2	KAZ		F1B		200H	
14251.0	1020-1023/	27	2			RADAR	83.3 sps	10k0	
14258.0	0750-0830	*	2	RUS		F1B		500H	*) Days: 5. 8. 12. 13.
14308.0	0700-1400/	*	2	RUS		F1B		500H	*) Days: 5. 6. 8. 10. 13. 19. 22.
18 MHz	0600-1030	*	2	G		RADAR	50/25sps	20k0	*) Days: 1. 13. 14. 20. (WebSDR 6d)
18 MHz	0645-1500	*	2	RUS		RADAR	40 sps	13k0E	*) Days: 5. 7. 10. 12. 14. 15. 17. 22. (WebSDR 22d)
21 MHz	0530-1500	*	2	G		RADAR	50/25sps	20k0	*) Days: 1. 2. 3. 5. 7. 13. 14. 16. 17. 28. 29. (WebSDR 18d)
21 MHz	0530-1600	*	2	RUS		RADAR	40 sps	13k0E	*) Days: 4. 9. 10. 13. 18. 19. 23. 24. 25. 27.28. 29. (WebSDR 18d)
21 MHz	0600-1100	*	2	CHN		RADAR	50 sps	10k0	*) Days: 5. 6. 7. (WebSDR 18d)

SRAL; Pekka, OH2BLU

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
21 MHz	0545-1130	*	2	CHN		RADAR	50/67sp s	10k0E	*) Days: 1. - 23. 25. - 29. 'foghorn'
21000.0	0915-0925/ /0925-0950	01	2			jam		6k0E	
21009.0	1655-	01	2			Jam		6k0E	
21152.0	/0830-1600	20	2			jam		10k0E	
21438.0	0530-1530	01 - 29	2	RUS	RCV	A1A	16 - 20 wpm	40H	Navip etc.
28 MHz	0630-1430	*	2	G		RADAR	12.5/ 25/50sp s	20k0	*) Days: 2. 4. 5. 7. - 10. 12. 14. 17. - 20. 23. 25. 27. 28. (WebSDR 22d)
28 MHz		*	2	IRN		RADAR	150/ 313	60k0E	*) Days: 3. - 6. 8. - 11. 13. - 17. 19. - 22. 24. 25. 27. 29. Modulation failures (WebSDR 26d)
28 MHz			2	IRN		RADAR	310/ 870	80k0E	Not heard
28860.0	0600-1530	*	2	IRN		RADAR	150/ 313	60k0E	*) Days: 1. 4. - 15. 19. -24. Modulation failures (WebSDR 26d)
28 MHz	0645-1330	*	2	RUS	Taxi disp.	F3E		3k0E	*) Days: 1. 2. 3. 5. - 22. 24. 25. 27. 29. 100 reports

URE; Gaspar, EA6AMM. Team members: EA4021SWL, EB4APL

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
6996.0	19:51	23	02	RUS		RADAR	40	12K0E	OTHR Contayner
7001.7	07:25	21	02			G1D	2400	2K70E	STANAG-4285
7008.0	14:06	05	02			F1B	75	250H	
7008.0	07:49	08	02			F1B	61	250H	Idling. Unclean
7008.0	19:13	21	02	RUS		RADAR	40	12K0E	OTHR Contayner
7008.0	17:36	22	02	RUS		RADAR	40	12K0E	OTHR Contayner
7008.0	19:37	28	02			J7D	120	2K70E	CIS-12
7012.0	18:15	12	02			J7D	120	2K70E	CIS-12
7012.0	19:35	25	02			J3E-U		2K40E	Non-amateur traffic. Male voices, Arabic language (Just QRT)
7013.0	18:16	17	02	RUS		RADAR	40	12K0E	OTHR Contayner
7018.9	08:23 vt*	22 vd*	02			N0N			Carrier from F1B system on 7019 kHz CF. *Also on 23 and 24/02; vt
7019.0	08:21 vt*	22 vd*	02			F1B F1A	50	200H	CIS 36-50 *Also on 23/02, 0802 UTC and 24/02, 0744 UTC
7023.0	15:04	26	02			J7D	120	2K70E	CIS-12
7030.0	19:02	05	02	RUS		RADAR	40	12K0E	OTHR Contayner
7036.0	18:00 vt*	19 vd*	02			F1B	50	250H	*Also on 25/02, 1939 UTC and 28/02, 1943 UTC
7042.0	14:51 vt*	23 vd*	02			XXX		CA10K0E	XXX. Jammer *Also on 26/02, 1459 UTC
7051.7	12:47 vt*	01 vd*	02			OTHER		1K20E	TDL. Long-lasting. Very often. 19 reports
7052.0	12:44 vt*	15 vd*	02			XXX		CA8K0E	XXX. Jammer *Also on 16/02, 0637 UTC
7054.0	15:33	05	02	RUS		F1B	50	200H	*Often. 8 reports
7057.0	18:46	14	02			J7D	120	2K70E	CIS-12

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kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
	vt*	vd*							*Also on 17/02, 1825 UTC
7057.0	18:25	17	02			J7D	120	2K70E	CIS-12
7057.5	12:37	27	02			F1B	75	200H	
7059.0	18:34	07	02	RUS		RADAR	40	12K0E	OTHR Contayner
7061.0	18:33 vt*	12 vd*	02	RUS		RADAR	40	12K0E	OTHR Contayner *Also on 17/02, 1832 UTC and 22/02, 2025 UTC
7065.9	20:37 vt*	06 vd*	02			NON			Carrier from F1B system on 7066 kHz CF. Long – lasting. *Also on 07, 08, 25 and 26/02; vt
7066.0	22:22	13	02	RUS		RADAR	40	12K0E	OTHR Contayner
7066.0	08:03 vt*	07 vd*	02			F1B F1A	50	200H	CIS 36-50. *Also on 25/02, 1045 UTC
7069.0	08:27	29	02			J7D	120	2K70E	CIS-12
7070.0 USB	20:04	24	02		514 288	J7D	125	1K80E	MIL-148-141A ALE
7084.0	20:32	06	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
7085.0	21:24 vt*	26 vd*	02	RUS		RADAR	40	12K0E	OTHR Contayner *Also on 27/02, 2105 UTC
7089.0	07:18	24	02			J7D	120	2K70E	CIS-12
7090.0	18:57	05	02			J3E-L		2K80E	UKR/RUS radiowar
7093.0	18:40	29	02	RUS		RADAR	40	12K0E	OTHR Contayner
7097.0	20:29	22	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
7098.0	21:00	29	02	RUS		RADAR	40	12K0E	OTHR Contayner. *Also on 7122 kHz CF and 7169 kHz CF. 3 simultaneous TX on 40m
7100.0	17:26	02	02			J3E-L		2K80E	UKR/RUS radiowar
7102.0	17:59	15	02	RUS		RADAR	40	12K0E	OTHR Contayner. *Also on 7176 kHz CF. 2 simultaneous TX on 40m
7108.0	20:34	06	02	CHN		RADAR	50	10K0E	OTHR short bursts
7110.0	19:26	09	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
7110.0	21:08	27	02			J3E-L		2K80E	UKR/RUS radiowar
7112.0	07:16	09	02			F1B	75	250H	
7115.0	19:17	05	02	CHN		RADAR	50	10K0E	OTHR short bursts
7119.0	18:59	05	02	CHN		RADAR	50	10K0E	OTHR short bursts
7120.0	18:23	17	02			J3E-L		2K80E	UKR/RUS radiowar
7120.0 USB	20:20	23	02			J7D	125	1K80E	MIL-188-141A ALE
7120.0	19:31	25	02	RUS		RADAR	40	12K0E	OTHR Contayner
7121.0	19:16	21	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
7121.0	20:23	21	02	RUS		RADAR	40	12K0E	OTHR Contayner
7122.0	19:23	29	02	RUS		RADAR	40	12K0E	OTHR Contayner
7124.0	18:34	12	02			J7D	120	2K70E	CIS-12; with additional tone on 7122 kHz
7133.0 USB	20:31	18	02		XYZ - ABC	J7D	125	1K80E	MIL-188-141A ALE
7134.0	21:00	18	02			F1B	50	200H	
7137.0	18:49	15	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
7141.0 LSB	19:40	28	02			G7D	60	2K50E	CHN-30
7155.0 LSB	20:15	23	02			G7D	60	2K50E	CHN-30
7156.5	17:43	07	02			XXX		CA3K20E	XXX. Jammer. Long-lasting. Very often

URE; Gaspar, EA6AMM. Team members: EA4021SWL, EB4APL

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
	vt*	vd*							19 reports
7158.0	15:27 vt*	05 vd*	02			XXX		CA10K0E	XXX. Jammer *Also on 06/02, 1436 UTC
7162.0	19:23	21	02	RUS		F1B	100	250H	Defective F1B TX
7169.0	21:00	29	02	RUS		RADAR	40	12K0E	OTHR Contayner. *Also on 7098 kHz CF and 7122 kHz CF. 3 simultaneous TX on 40m
7171.0	20:29	01	02	CHN		G7D	60	2K50E	7171 kHz LSB: CHN-30
7174.0	18:46 vt*	13 vd*	02	CHN		RADAR	66.7	10K0E	OTHR short bursts *Also on 23/02, 2003 UTC
7176.0	17:59	15	02	RUS		RADAR	40	12K0E	OTHR Contayner
7177.0	19:58	23	02	RUS		RADAR	40	12K0E	OTHR Contayner. *Also on 6996 kHz CF and 7192 kHz CF. 3 simultaneous TX on 40m
7178.0	18:20	17	02	RUS		RADAR	40	12K0E	OTHR Contayner
7180.0	20:28	01	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
7184.5 USB	08:39	23	02			G7D	75	2K40E	CHN 4+4
7192.0	20:00	23	02	RUS		RADAR	40	12K0E	OTHR Contayner. *Also on 7177 kHz CF and 6996 kHz CF. 3 simultaneous TX on 40m
7192.9	08:55	14	02			NON			Carrier from F1B RUS system on 7193 kHz CF (RDL). Long-lasting. *Also on 16/02, 0632 UTC
7193.0	12:45 vt*	01 vd*	02	RUS	RDL	F1B F1A	50	200	CIS 36-50 *Also on 03, 13, 14 and 16/02; vt
7195.0	18:56	05	02	RUS		RADAR	40	12K0E	OTHR Contayner
7197.0	18:35	07	02	RUS		RADAR	40	12K0E	OTHR Contayner. *Also on 7059 kHz CF. 2 simultaneous TX on 40m
7200.0	19:27	09	02			B7D	75	6K0E	LINK 11 CLEW DSB
10117.0	17:39	07	02	RUS		RADAR	40	12K0E	OTHR Contayner
10120.0	20:39	06	02	CHN		RADAR	50	10K0E	OTHR short bursts
10121.5	20:32	23	02			J3E-U		2K40E	Non-amateur comms. Unid sts, male voices, Arabic Language. Engine sound. Most probably, fishers.
10124.0	20:15 vt*	09 vd*	02	AUS		RADAR	7	02K0E	OTHR JORN bursts; with short intro tone *Also on 22, 23 and 27/02; vt
10124.0	19:31	15	02	AUS		RADAR	7.2	12K0E	OTHR JORN bursts; with short intro tone
10150.0	20:02	21	02	AUS		RADAR	7	10K0E	OTHR short bursts; with short intro tone
13975.0	06:59	07	02	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus. Splatter to 14005 kHz
14000.0	07:54 vt*	02 vd*	02			J3E-U		2K40E	J3E-U. Spanish fishers. Same ops as on 21000 kHz USB. *Also on 05 and 08/02; vt
14000.0	07:47	09	02			RADAR		CA5K0E	SuperDARN bursts
14001.0	19:24	13	02			RADAR		CA5K0E	SuperDARN bursts. Long lasting
14005.0	07:48	09	02			RADAR		CA5K0E	SuperDARN bursts
14005.75*	08:20 vt**	23 vd**	02			XXX		2K40E	Unidentified looped signal. *Also RX on 14258.75 kHz CF. BD = 4 sec. BRI = 3 sec. Long-lasting. Often. **Also on 24, 25, 26, 27, 28 and 29/02; vt
14010.0	07:53	09	02			RADAR		CA5K0E	SuperDARN bursts
14023.0	13:48	17	02	CHN		RADAR	50	10K0E	OTHR short bursts
14025.0	08:13	09	02			RADAR		CA5K0E	SuperDARN bursts
14026.0	10:09	03	02			J7D	120	2K70E	CIS-12
14073.5	13:32	14	02			F1B	600	600H	DPRK-FSK 600 ARQ

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kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
14098.0	12:17	29	02	CHN		RADAR	50	10K0E	OTHR short bursts
14098.5	06:47	01	02			G1D		1K20E	DPRK-PSK 1200 ARQ
14098.5	07:27 vt*	01 vd*	02			F1D	600	600H	DPRK-FSK 600 ARQ* Also on 02, 03, 05, 07 and 10/02. Often
14101.5	06:52	21	02			XXX		CA3K0E	XXX. Jammer (same as on 7156.5 kHz CF; 85 Hz)
14108.0	12:46	13	02	CHN		RADAR	50	10K0E	OTHR short bursts
14109.5	09:07	02	02			OTHER		1K20E	DPRK-PSK 1200 ARQ
14110.0	15:38	20	02			XXX		20K0E	XXX: Unidentified bursts. Burst duration: ca 13 sec
14111.0	16:54	27	02	CHN		RADAR	50	10K0E	OTHR short bursts
14123.0	17:35	26	02	RUS		RADAR	40	12K0E	OTHR Contayner
14130.0	13:35	12	02	CHN		RADAR	50	10K0E	OTHR short bursts
14144.0	17:28	27	02	CHN		RADAR	50	10K0E	OTHR short bursts
14169.0	07:22	16	02	RUS		RADAR	40	12K0E	OTHR Contayner
14170.0	09:19 vt*	03 vd*	02	CHN		RADAR	50	10K0E	OTHR. Continuous TX *Also on 04/02, 0712 UTC
14171.0	06:55 vt*	12 vd*	02			J7D	120	2K70E	CIS-12 *Also on 22/02, 0844 UTC
14174.0	15:56	26	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
14180.0	17:32	07	02	CHN		RADAR	41.7	10K0E	OTHR short bursts
14180.0	13:48	15	02	CHN		RADAR	50	10K0E	OTHR short bursts
14186.0	07:58	16	02	RUS		RADAR	40	12K0E	OTHR Contayner. *Also on 14212 kHz CF. <i>2 simultaneous TX on 20m</i>
14192.0	06:50 vt*	01 vd*	02	RUS		J3E-U	50	200H	*Daily
14193.0	13:08	01	02	CHN		RADAR	50	10K0E	OTHR short bursts
14198.5	07:16 vt*	02 vd*	02			F1B	600		DPRK-FSK 600 ARQ. Very often 15 reports
14199.0	07:33	08	02	CHN		RADAR	83.3	10K0E	OTHR short bursts
14204.0	09:17	03	02	RUS		RADAR	40	12K0E	OTHR Contayner
14212.0	07:58	16	02	RUS		RADAR	40	12K0E	OTHR Contayner
14219.0	12:41	06	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
14220.5	08:34	02	02			F1D	600	600H	DPRK-FSK 600 ARQ
14226.0	15:57	26	02	CHN		RADAR	50	10K0E	OTHR short bursts
14234.0	06:46	15	02	RUS		RADAR	40	12K0E	OTRH Contayner
14238.0	13:51	17	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
14250.0	12:34	15	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
14253.0	15:11	12	02	CHN		RADAR	41.7	10K0E	OTHR short bursts
14255.0	15:11	12	02	CHN		RADAR	41.7	10K0E	OTHR short bursts
14257.0	15:11	12	02	CHN		RADAR	41.7	10K0E	OTHR short bursts
14258.75*	07:51 vt**	05 vd**	02			F1B	50	500H	Unidentified looped signal. *Also RX on 14005.75 kHz CF. BD = 4 sec. BRI = 3 sec. Long-lasting. Often. **Also on 24, 25, 26, 27, 28 and 29/02; vt
14258.0	13:35	14	02	CHN		RADAR	50	10K0E	OTHR short bursts
14265.0	15:35	21	02	CHN		RADAR	50	10K0E	OTHR short bursts
14269.9	07:09	12	02			F1B	100	150	Possibly, part of a Yachta T-219 voice scrambler system
14270.0	07:39	09	02			F1B	100	500H	

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kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
14270.0	08:03	10	02			J7D	120	2K70E	CIS-12
14278.0	22:26	13	02	CHN		RADAR	50	10K0E	OTHR short bursts
14292.0	12:33	07	02			F1B	100	500H	
14294.0	09:03	20	02			J7D	120	2K70E	CIS-12
14295.0	07:11	15	02			W7D	30	2K80E	CIS-60
14295.0	13:46	15	02	CHN		RADAR	50	10K0E	OTHR short bursts
14298.5	07:38 vt*	01 vd*	02			G1D		1K20E	DPRK-PSK 1200 ARQ. *Also on 02, 15, 18 and 23/02; vt
14298.5	13:03 vt*	02 vd*	02			F1B	600	600H	DPRK-FSK 600 ARQ. *Often 14 reports
14301.0	16:37	27	02	CHN		RADAR	50	10K0E	OTHR short bursts
14301.9	07:40 vt*	13 vd*	02			W7D	30	2K80E	CIS-60 *Also on 14/02, 0721 UTC
14308.0	08:52	05	02			F1B	75	500H	*Also on 06/02; 0839 UTC, 13/02, 0849 UTC and 22/02, 0806 UTC
14308.0	14:00	05	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
14310.0	13:34 vt*	14 vd*	02	CHN		RADAR	66.7	10K0E	OTHR short bursts. *Also on 21/02, 1531 UTC and 27/02, 1729 UTC
14313.0	06:45	07	02			XXX		5K0E	XXX. Jammer. Harmonic of jammer on 7156.5 kHz CF. Often. 8 reports
14317.0	14:40	09	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
14318.5	07:20	04	02			F1D	600	600H	DPRK-FSK 600 ARQ
14320.5	07:42	04	02			F1D	600	600H	DPRK-FSK 600 ARQ
14328.0	12:13	09	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
14331.5	07:33	05	02			F1D	600	600H	DPRK-FSK 600 ARQ
14333.0	12:32	07	02	RUS		RADAR	40	12K0E	OTHR Contayner
14336.0	14:00	05	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
14337.0	12:18	29	02	CHN		RADAR	41.7	10K0E	OTHR short bursts
14342.0	14:37	23	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
14344.0	12:47	22	02	CHN		RADAR	50	10K0E	OTHR short bursts
14348.0	15:33	21	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
14350.0	08:16	05	02			XXX		CA28K0E	XXX
14351.0	13:47	15	02	CHN		RADAR	50	10K0E	OTHR short bursts
18060.0	08:45	01	02	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus. Partially inside the 17m band
18065.0	06:35	20	02	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
18072.0	07:31	02	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
18075.0	07:09	10	02	CHN		RADAR	50	10K0E	OTHR short bursts
18085.0	08:44	08	02	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
18158.0	07:33	15	02	RUS		RADAR	40	12K0E	OTHR Contayner
18160.0	12:51	02	02	RUS		RADAR	40	12K0E	OTHR Contayner
18163.0	06:51	07	02	RUS		RADAR	40	12K0E	OTHR Contayner
18165.0	10:09	13	02	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
18169.0	12:14	06	02	RUS		RADAR	40	12K0E	OTHR Contayner
18170.0	06:52	01	02	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
18170.0	14:01	05	02	RUS		RADAR	40	12K0E	OTHR Contayner
18171.0	08:01 vt*	07 vd*	02	RUS		RADAR	40	12K0E	OTHR Contayner. *Also on 13/02, 0715 UTC and 23/02, 0826 UTC
18173.0	07:34 vt*	05 vd*	02	RUS		RADAR	40	12K0E	OTHR Contayner *Also on 12/02, 1340 UTC

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kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
18173.0	13:40	12	02	RUS		RADAR	40	12K0E	OTHR Contayner
21000.0	07:36	03	02			XXX		3K40E	Unidentified continuous signal, with center carrier (AM). Different BW and signal changes occurred during the TX
21000.0	07:25	09	02			F1B		1K0E	
21000.0	10:18	20	02			J3E-U			Unid sts, male and female voices, unid lang
21008.3	07:34	25	02			F1D	600	600H	DPRK-FSK 600 ARQ. Long-lasting
21011.5	08:01	29	02			F1D	600	600H	DPRK-FSK 600 ARQ
21026.3	08:48	17	02			XXX	2400	2K40E	Unidentified CHN modem
21026.5 USB	08:31	17	02			G7D	75	2K40E	CHN 4+4
21031.0	08:20	17	02	CHN		RADAR	50	10K0E	OTHR short bursts
21034.5 USB	08:38 vt	11 vd*	02			G7D	75	2K40E	CHN 4 +4. *Also on 13,14,16,18, 20 and 22/02; vt. Often
21036.3	08:47	18	02			XXX	2400	2K40E	Unidentified CHN modem. Also on 20, 21 and 22/02; vt
21038.5	06:37	13	02			F1D	600	600H	DPRK-FSK 600 ARQ
21042.0	07:33	02	02	CHN		RADAR	50	10K0E	OTHR short bursts
21054.2	07:43 vt*	01 vd*	02			F1D	100	900H	*Also on 05/02, 0807 UTC, 11/02, 0736 UTC and 14/02, 0830 UTC
21054.2	08:07 vt*	05 vd*	02			F1B	100	900H	*Also on 11/02, 0736 UTC – 14/02, 0830 UTC – 16/02, 0805 UTC
21055.0	07:11	01	02	CHN		RADAR	50	10K0E	OTHR short bursts
21056.0	08:56	09	02	CHN		RADAR	50	10K0E	OTHR short bursts
21058.0	08:26	25	02			F1D	600	600	DPRK-FSK 600 ARQ
21062.0	08:47	29	02			XXX		6K0E	Unidentified continuous signal, with center carrier (AM). Different BW and signal changes occurred during the TX (same signal as on 21000 kHz CF on 03/02, 0736 UTC)
21096.0	12:39	15	02	CHN		RADAR	50	10K0E	OTHR short bursts
21097.0	08:40	01	02	CHN		RADAR	47.7	10K0E	OTHR short bursts
21100.0	07:07	13	02			J3E-U		2K80E	Non-amateur comms. Male voices. Unid language
21101.5	08:20	29	02			G7D	75	2K40E	21101.5 kHz CF: CHN 4+4 (CF: 21103.3 kHz)
21103.3	08:22	29	02			G1D	2400	2K40E	MIL-188-101A
21108.0	07:37	14	02			F1D	600	600H	DPRK-FSK 600 ARQ. *Also on 20, 23 and 25/02, vt
21108.5	07:16 vt*	03 vd*	02			F1D	600	600H	DPRK-FSK 600 ARQ *Also on 18/02, 0744 UTC
21111.0 USB	07:24	04	02			G1D	2400	2K40E	MIL-188-110A
21111.0	06:59	14	02	CHN		RADAR	50	10K0E	OTHR short bursts
21115.0	06:54	01	02	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
21142.0	06:43	14	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
21145.0	08:44 vt*	06 vd*	02	MRC	P1 P2	J7D	125	1K80E	MIL-188-141A ALE *Also on 11, 12, 25 and 27/02; vt. Often
21150.0	08:28	08	02	CHN		RADAR	50	10K0E	OTHR short bursts
21151.5	16:12	27	02			XXX		CA9K0E	XXX. Jammer
21154.0	07:09	01	02	CHN		RADAR	66.7	10K0E	OTHR short bursts

URE; Gaspar, EA6AMM. Team members: EA4021SWL, EB4APL

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
21158.0	14:15	25	02	RUS		RADAR	40	12K0E	OTHR Contayner
21159.0	08:01	12	02	CHN		RADAR	50	10K0E	OTHR short bursts
21161.0	14:40 vd*	23 vd*	02	RUS		RADAR	40	12K0E	OTHR Contayner *Also on 29/02, 0732 UTC
21166.3	08:52	17	02			XXX	2400	2K40E	
21169.0	12:28	18	02	RUS		RADAR	40	12K0E	OTHR Contayner
21184.5 USB	08:41	14	02			G7D	75	2K40E	CHN 4+4. *Also on 15, 16, 17, 18, 22 and 24/02; vt. Often
21185.0	14:40	07	02	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
21186.3	08:50	17	02			XXX	2400	2K40E	Unidentified CHN modem. *Also on 18, 22, 23 and 24/02; vt. Often
21187.0	07:54	23	02	CHN		RADAR	41.7	10K0E	OTHR short bursts
21188.5	08:42	14	02			F1D	600	600H	DPRK-FSK 600 ARQ
21190.2	07:38	11	02			F1B		500H	
21200.0	12:45	07	02	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
21208.0	07:18	25	02	CHN		RADAR	66.7	10K0	OTHR short bursts
21210.0	12:41	01	02	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
21216.5	08:13	29	02			F1D	600	600H	DPRK-FSK 600 ARQ
21224.5 USB	08:20	27	02			G7D	75	2K40E	CHN 4+4
21249.0	07:38 vt*	12 vd*	02	CHN		RADAR	66.7	10K0E	OTHR short bursts *Also on 12/02, 0803 UTC
21250.0	07:18	03	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
21264.0	06:48	16	02	CHN		RADAR	50	10K0E	OTHR short bursts
21266.0	12:38	15	02	CHN		RADAR	41.7	10K0E	OTHR short bursts
21281.0	06:39	13	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
21287.0	08:12	29	02	CHN		RADAR	50	10K0E	OTHR short bursts
21290.0	20:45	06	02	G		RADAR	25	20K0E	OTHR. UK SBA, Cyprus
21297.0	09:59	06	02	CHN		RADAR	50	10K0E	OTHR short bursts
21298.0	08:45	06	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
21299.0	07:39	04	02	CHN		RADAR	50	10K0E	OTHR short bursts
21305.0	08:41	01	02	CHN		RADAR	47.7	10K0E	OTHR short bursts
21305.0	08:28	03	02	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
21316.0	08:34	15	02	CHN		RADAR	50	10K0E	OTHR. Continuous TX
21316.0 USB	07:43	26	02			J7D	215	1K80E	MIL-188-141A ALE
21316.0	07:44	26	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
21323.0	07:36	05	02	CHN		RADAR	50	10K0E	OTHR short bursts
21329.0	07:32	10	02	CHN		RADAR	41.7	10K0E	OTHR short bursts
21330.0	08:32	22	02	CHN		RADAR	41.7	10K0E	OTHR short bursts
21330.0	07:07	24	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
21332.0	06:54	07	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
21333.0	09:06	29	02	CHN		RADAR	41.7	10K0E	OTHR short bursts
21334.0	06:50	16	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
21335.0	07:22	15	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
21335.0	07:19	25	02	CHN		RADAR	50	10K0E	OTHR short bursts
21337.0	07:34	11	02	CHN		RADAR	41.7	10K0E	OTHR short bursts
21338.0	06:54	15	02	CHN		RADAR	50	10K0E	OTHR short bursts
21342.0	07:19	18	02	CHN		RADAR	66.7	10K0E	OTHR short bursts

URE; Gaspar, EA6AMM. Team members: EA4021SWL, EB4APL

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
21343.0	09:56	06	02	CHN		RADAR	41.7	10K0E	OTHR short bursts
21344.0	06:51	02	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
21346.0	09:56	06	02	CHN		RADAR	50	10K0E	OTHR short bursts
21347.0	07:58	27	02	RUS		RADAR	40	12K0E	OTHR Contayner. *Also on 21380 kHz CF. 2 simultaneous TX on 15m
21350.0	12:43	13	02	REU		RADAR	25	20K0E	OTHR. UK SBA, Cyprus
21352.0	06:55	15	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
21354.0	07:43	08	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
21355.0	06:39	14	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
21355.0	09:04	14	02	G		RADAR	25	20K0E	OTHR. UK SBA, Cyprus
21356.0	07:37	12	02	CHN		RADAR	50	10K0E	OTHR short bursts
21358.0	09:10	27	02	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus (Rare! CF QRG not ending on 0 or 5)
21360.0	07:34	10	02	CHN		RADAR	41.7	10K0E	OTHR short bursts
21360.0	09:06	14	02	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
21362.0	07:09	24	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
21367.0	07:20	18	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
21369.0	11:39 vt*	27 vd*	02	RUS		RADAR	40	12K0E	OTHR Contayner *Also on 27/02, 1444 UTC
21371.0	06:41	14	02	CHN		RADAR	50	10K0E	OTHR short bursts
21374.0	08:42 vt*	06 vd*	02	CHN		RADAR	50	10K0E	OTHR. Continuous TX *Also on 07/02, 0653 UTC
21374.0	06:53	07	02	CHN		RADAR	50	10K0E	OTHR. Continuous TX
21374.0	07:23	09	02	CHN		RADAR	41.7	10K0E	OTHR short bursts
21374.0	06:52	16	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
21375.0	14:38	02	02	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus. *Also on 21425 kHz CF. 2 simultaneous TX on 15m
21378.0	10:37	25	02	RUS		RADAR	40	12K0E	OTHR Contayner
21379.0	06:55	02	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
21380.0	08:59	07	02	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
21380.0	08:54	12	02	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
21380.0	07:20	13	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
21380.0	07:57	27	02	RUS		RADAR	40	12K0E	OTHR Contayner
21381.0	07:00	14	02	CHN		RADAR	41.7	10K0E	OTHR short bursts
21386.0	08:55	23	02	RUS		RADAR	40	12K0E	OTHR Contayner
21388.0	08:30	08	02	CHN		RADAR	50	10K0E	OTHR short bursts
21390.0 USB	08:03	16	02			J7D	125	1K80E	MIL-188-141A ALE
21394.0	06:52	02	02	CHN		RADAR	50	10K0E	OTHR short bursts
21395.0	13:15	07	02	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus. *Also on 21200 kHz CF. 2 simultaneous TX on 15m
21396.0	07:19	03	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
21397.0	06:53	02	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
21403.0	09:09	05	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
21404.0	08:21	17	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
21405.0	07:22	18	02	CHN		RADAR	41.7	10K0E	OTHR short bursts
21408.0	07:38	05	02	CHN		RADAR	41.7	10K0E	OTHR short bursts
21409.0	09:07	29	02	CHN		RADAR	41.7	10K0E	OTHR short bursts
21410.0	08:28	14	02	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus

URE; Gaspar, EA6AMM. Team members: EA4021SWL, EB4APL

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
21410.0	07:06	24	02	RUS		RADAR	40	12K0E	OTHR Contayner
21411.0	07:42	23	02	RUS		RADAR	40	12K0E	OTHR Contayner
21412.0	07:12	10	02	CHN		RADAR	41.7	10K0E	OTHR short bursts
21414.0	07:35 vt*	01 vt*	02			XXX		CA16K0E	Unidentified continuous signal. *Daily
21415.0	08:44	01	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
21415.0	06:55	07	02	CHN		RADAR	41.7	10K0E	OTHR short bursts
21422.0	07:30	09	02	RUS		RADAR	40	12K0E	OTHR Contayner
21423.0	08:34	04	02	RUS		RADAR	40	12K0E	OTHR Contayner
21425.0	14:29	02	02	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
21425.0	06:42	14	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
21431.0	13:08	12	02	RUS		RADAR	40	12K0E	OTHR Contayner
21432.0	08:32 vt*	02 vd*	02	RUS		RADAR	40	12K0E	OTHR Contayner *Also on 10/02, 0732 UTC
21433.0	07:09	24	02	CHN		RADAR	41.7	10K0E	OTHR short bursts
21438.0	08:38 vt*	01 vd*	02	RUS	RCV	A1A			RUS navy QTC *Daily
21440.0	07:20	02	02	CHN		RADAR	66.7	10K0E	OTHR short bursts
21445.0	09:07	05	02	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
24901.0	08:07	07	02	RUS		RADAR	40	12K0E	OTHR Contayner
24948.0	07:02	21	02	CHN		RADAR	50	10K0E	OTHR short bursts
24955.0	07:20	03	02	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
24956.0	07:52	26	02	CHN		RADAR	50	10K0E	OTHR short bursts
24972.0	06:48	14	02	RUS		RADAR	40	12K0E	OTHR Contayner
24980.0	07:34	09	02	CHN		RADAR	41.7	10K0E	OTHR short bursts
28001.8	07:54	05	02			PSK	1200	2K10E	T-230 aka Mahovik
28051.5	08:25	02	02			F1B	51	300H	Fishing buoy
28125.0	07:13 vt*	02 vd*	02			F3E			Non-amateur comms. Female voice. Slavic language. Short traffic. *Often
28135.0	07:32 vt*	01 vd*	02			F3E			Non-amateur comms. Female voice. Slavic language. Short traffic. *Often
28155.0	08:23 vt*	02 vd*	02			F3E			Non-amateur comms. Female voice. Slavic language. Short traffic. *Often
28155.0	15:09	05	02	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus. *Also on 28715 kHz CF. 2 simultaneous TX on 10m
28162.0	08:12	05	02	RUS		RADAR	40	12K0E	OTHR Contayner
28195.0	07:20 vt*	01 vd*	02			F3E			Non-amateur comms. Female voice. Slavic language. Short traffic. *Often
28205.0	07:18 vt*	01 vd*	02			F3E			Non-amateur comms. Female voice. Slavic language. Short traffic. *Often
28205.0	07:34 vt*	01 vd*	02			F3E			Non-amateur comms. Female voice. Slavic language. Short traffic. *Often
28215.0	07:37 vt*	01 vd*	02			F3E			Non-amateur comms. Female voice. Slavic language. Short traffic. *Often
28225.0	07:20 vt*	01 vd*	02			F3E			Non-amateur comms. Female voice. Slavic language. Short traffic. *Often
28245.0	07:19 vt*	01 vd*	02			F3E			Non-amateur comms. Female voice. Slavic language. Short traffic. *Often
28265.0	07:11 vt*	02 vd*	02			F3E			Non-amateur comms. Female voice. Slavic language. Short traffic. *Often
28315.0	14:38	07	02	G		RADAR	25	20K0E	OTHR. UK SBA, Cyprus

URE; Gaspar, EA6AMM. Team members: EA4021SWL, EB4APL

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
28330.0	07:15	04	02	G		RADAR	25	20K0E	OTHR. UK SBA, Cyprus
28340.0	09:26	11	02	G		RADAR	25	20K0E	OTHR. UK SBA, Cyprus
28345.0	07:24	14	02	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
28580.0	09:26	23	02	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
28640.0	06:49	07	02	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
28710.0	14:37	09	02	G		RADAR	25	20K0E	OTHR. UK SBA, Cyprus
28715.0	14:47	05	02	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
28735.0	07:01	12	02	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
28740.0	12:10	17	02	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
28770.0	12:21 vt*	04 vd*	02	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus *Also on 23/02, 0712 UTC
28780.0	15:19	20	02	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
28795.0	09:35	07	02	G		RADAR	25	20K0E	OTHR. UK SBA, Cyprus
28860.0	09:39 vt*	01 vd*	02	IRN		RADAR	150 313	45K0E	OTHR. Alternating 150 and 313 sps bursts. * Very often. 19 reports
28860.0	07:11	13	02	IRN		RADAR	150 313	45K0E	OTHR. Alternating 150 and 313 sps bursts. *Also on 29400 kHz CF. 2 simultaneous TX on 10m
28945.0	14:17	25	02	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
29214.0	07:58	21	02			RADAR	40	CA15K0E	OTHR? Contayner??? (BW ca 15K0E, 40 sps)
29225.0	10:38	25	02	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
29250.0	09:35	11	02			RADAR	2.73	500K0E	Unknown radar. BW = 500 kHz. 2.73 sps
29250.0	07:57	26	02			XXX	2.73	500K	Radar. BW = 500 kHz (!). 2.73 sps
29255.0	11:56	08	02	G		RADAR	25	20K0E	OTHR. UK SBA, Cyprus
29270.0	08:59	13	02	G		RADAR	50	20K0E	OTHR. UK SBA, Cyprus
29300.0	09:54	11	02	G		RADAR	25	20K0E	OTHR. UK SBA, Cyprus
29350.0	07:15	10	02	IRN		RADAR	150	45K0E	OTHR. Alternating 150 and 313 sps bursts. *Also on 28860 kHz CF. 2 simultaneous TX on 10m
29350.0	06:33	20	02	IRN		RADAR	150 313	45K0E	OTHR. Alternating 150 and 313 sps bursts. *Also on 28860 kHz CF. 2 simultaneous TX on 10m
29400.0	06:53	13	02	IRN		RADAR	150 313	45K0E	OTHR. Alternating 150 and 313 sps bursts
29400.0*	09:43	18	02	IRN		RADAR	150 313	45K0E	OTHR. Alternating 150 and 313 sps bursts. <u>*Hopping.</u>
29450.0	07:02 vt*	15 vd*	02	IRN		RADAR	150 313	45K0E	OTHR. Alternating 150 and 313 sps bursts. Also on 28860 kHz CF. *Also on 28/02, 0800 UTC . 2 simultaneous TX on 10m.
29450.0*	08:00	22	02	IRN		RADAR	150 313	45K0E	OTHR. Alternating 150 and 313 sps bursts. <u>*Hopping.</u> **Also on 28860 kHz CF. 2 simultaneous TX on 10m
29500.0*	07:12 vt**	03 vd**	02	IRN		RADAR	150 313	45K0E	OTHR. Alternating 150 and 313 sps bursts. <u>*Hopping.</u> *Also on 28860 kHz CF. **Also on 04, 11, 17, 23 and 24/02; vt. 2 simultaneous TX on 10m.
29500.0*	07:43 vt**	05 vd*	02	IRN		RADAR	150 313	45K0E	OTHR. Alternating 150 and 313 sps bursts. *Also on 28860 kHz CF. **Also on 08, 09, 14 and 16/02; vt. 2 simultaneous TX on 10m
29500.0	11:47	27	02	IRN		RADAR	150 313	45K0E	OTHR. Alternating 150 and 313 sps bursts

URE; Gaspar, EA6AMM. Team members: EA4021SWL, EB4APL

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
29550.0*	12:22	29	02	IRN		RADAR	150 313	45K0E	OTHR. Alternating 150 and 313 sps bursts. <i>*Hopping</i>
29635.0	07:37	08	02	G		RADAR	25	20K0E	OTHR. UK SBA,Cyprus

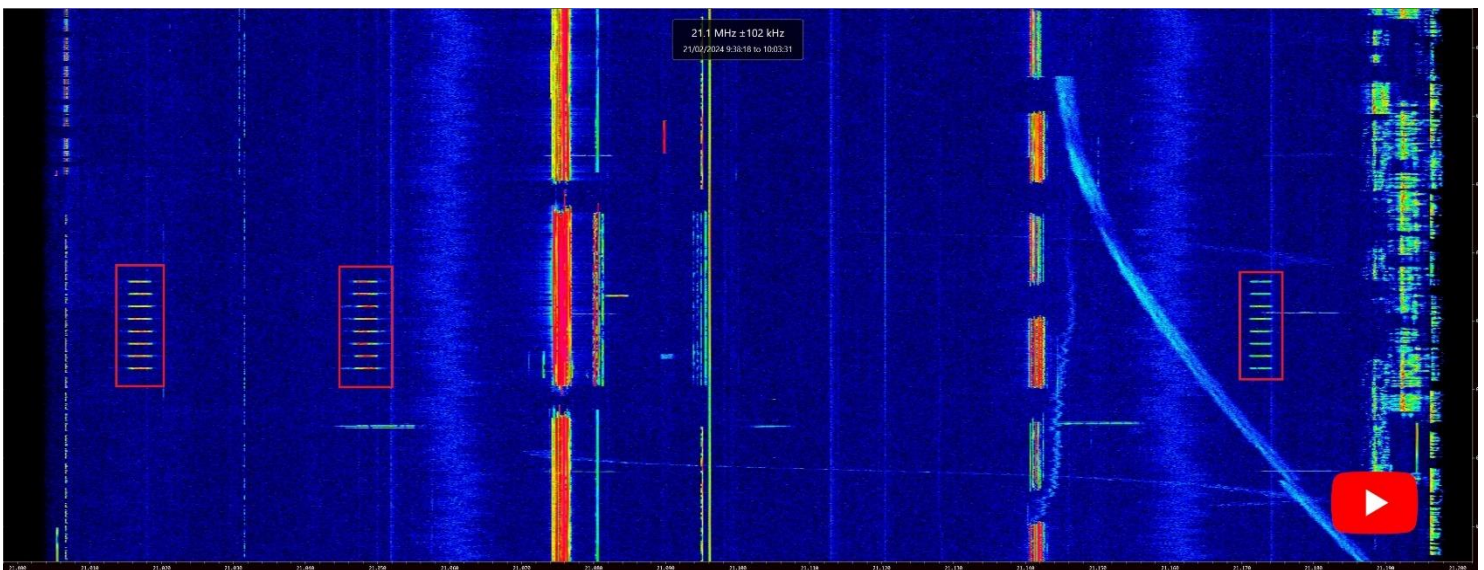
VERON; Ruud, PG1R. Credit to observers: Dick, PA0GRU

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7008.0	1911	21	02	RUS		RADAR	40	12K0E	CF; OTHR Contayner
7054.0	1828	03	02	RUS		F1B		200H	UiPtr; idle
7065.0	1900	08	02	RUS		RADAR	40	12K0E	OTHR Contayner
7115.0	2030	29	02	RUS		RADAR	40	12K0E	CF; OTHR Contayner
7122.0	1801	10	02	UKR		J3E-L		3K0E	UKR-RUS radiowar; S7; loop "Putin Russian Schwein"
7137.0	1752	10	02	RUS		RADAR	40	12K0E	OTHR Contayner
14192.0	1510	10	02	RUS		F1B		200H	UiPtr
14192.0	1459	25	02	RUS		F1B		200H	UiPtr; S4
14192.0	0846	28	02	RUS		F1B		200H	UiPtr
14308.0	0930	13	02	RUS		F1B		500H	UiPtr
21064.0	1419	24	02	G		RADAR		20K0E	OTHR UK AB Cyprus
21157.0	1435	25	02	RUS		RADAR	40	12K0E	CF; OTHR Contayner; very strong S9++; long lasting: at 15:22utc still on freq.
21299.0	0917	28	02			RADAR			

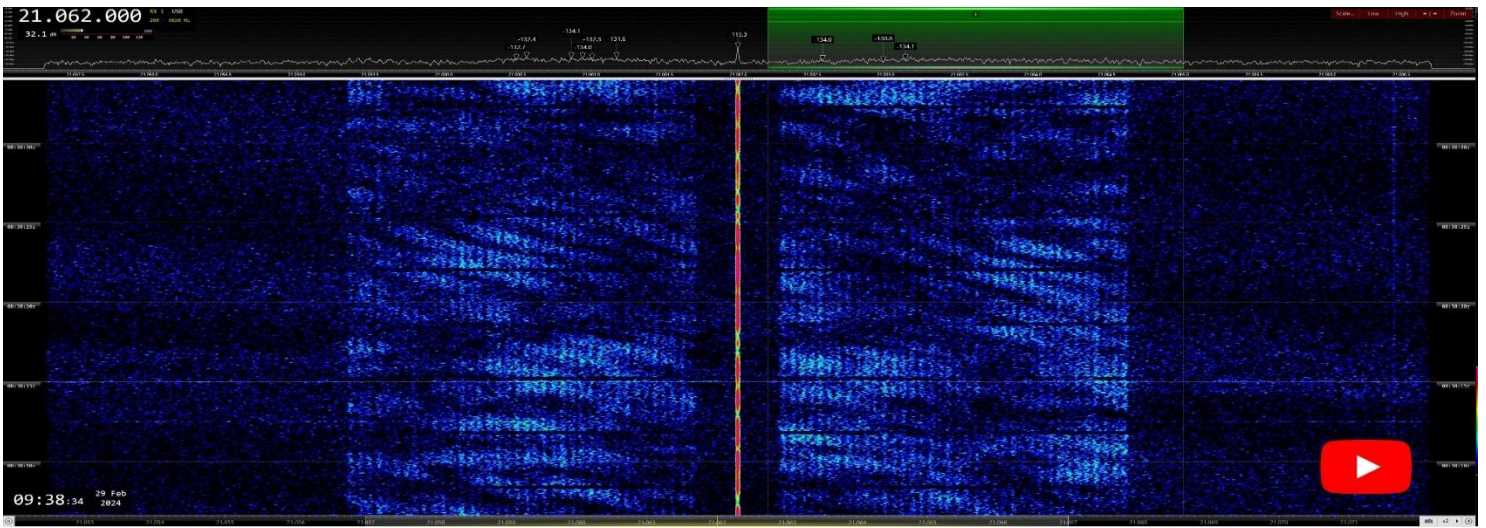
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IARUMS R1 Coordinators: <https://www.iau-r1.org/spectrum/monitoring-system/iarums-region-1-coordinators/>

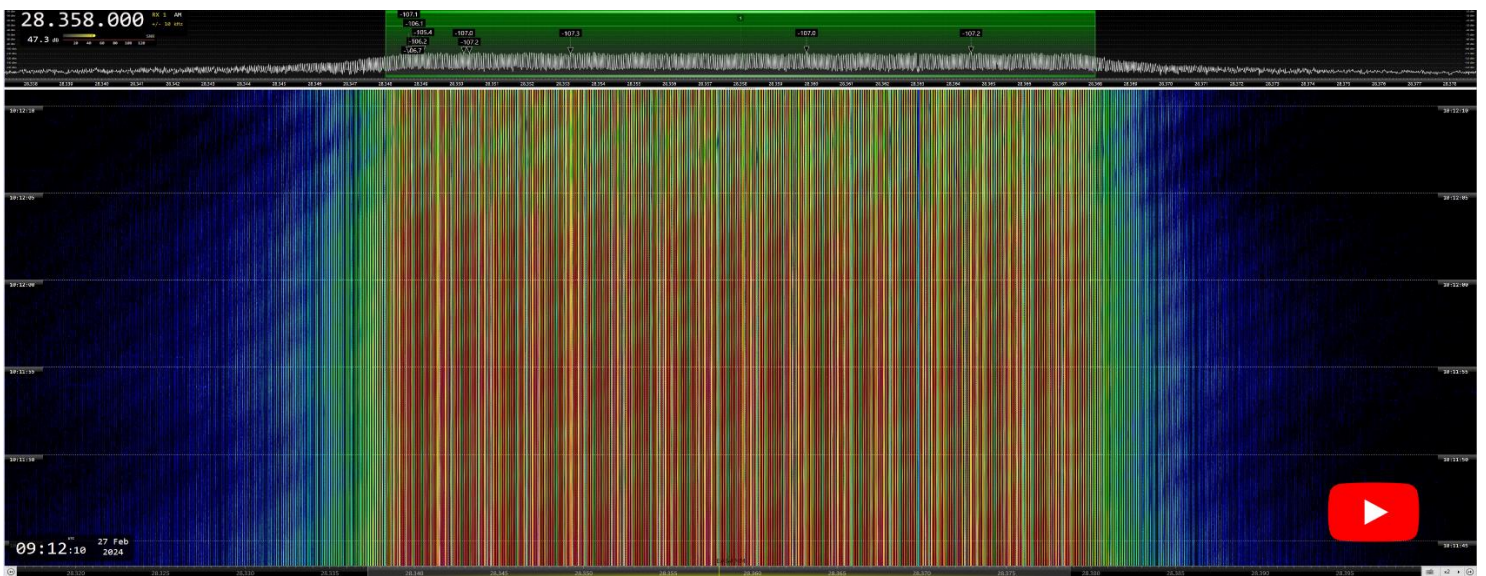
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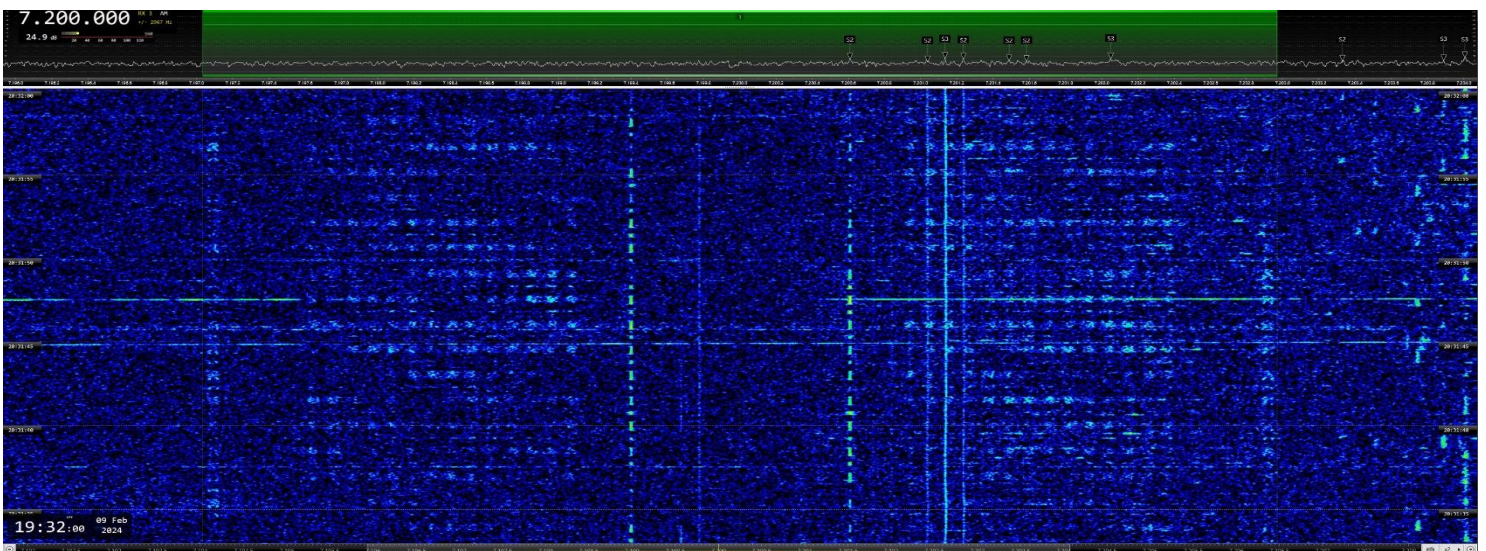
21213 kHz USB: RACAL Panther H handshake. The RACAL Panther H is an intelligent frequency hopping transceiver (10 hops per second) used for MIL communications. This signal can be heard on most of the HF amateur radio bands, daily, since many years.



21062 kHz CF: XXX. Unidentified continuous signal, with center carrier (AM). Different BW and signal changes occurred during the TX. The signal very similar to the one received on 21000 kHz CF on February the 02th, 0736 UTC



28358 kHz CF. Rare transmission of the British OTHR located in the UK Sovereign Base Are in Cyprus. BW = 20K0E. 50 sps. This radar always transmit in center frequencies ending on 0 or on 5 (i.e.: 28355 kHz CF or 28360 kHz CF). In this unique case, the CF QRG theis not ending on 5 or 0.



7200 kHz CF: LINK 11 DSB. Partially inside the 40m band. BD7. BW = 6K0. 75 Bd. Weak & QSB